

A number of United States Patents have also issued on brake locking mechanisms. U.S. Pat. No. 4,040,675 discloses a vehicle anti-theft device which maintains the braking function of the braking fluid by preventing reverse flow

In accordance with the present invention, a device for locking the brake or clutch of a vehicle in an upward or 65 unextended position and preventing vehicle theft is disclosed. The invention comprises a base member for a placement on the floorboard of a vehicle beneath a brake or

clutch pedal; a U-shaped housing extending downward and having a first arm attached to the base and having a second shorter arm defining a gap for receipt of a brake or clutch pedal shaft, said space between the first and second arms defining a slot for receiving the brake or clutch pedal shaft and permitting its full extension upward through said shaft; and locking means associated with the second arm for locking the underside of the pedal within the slot such that the brake pedal cannot be depressed.

In a more preferred embodiment, the present invention is directed to a device for locking the brake of a vehicle and preventing its theft comprising: a base member for a placement on the floorboard of a vehicle beneath a brake pedal; a metallic U-shaped housing extending downward and having a first arm attached to the base and having a second shorter arm defining an opening for receiving of a brake pedal shaft, said space between the first and second arms defining a slot for receiving the brake pedal shaft and permitting its full extension upward through said slot, said first arm having a cylindrical opening therethrough; a rod extending through said cylindrical opening and being slidable therewith, said rod having a pin which catches the underside of said brake pedal shaft and pulls it upward in a decompressed position; and locking means for locking the position of the rod and pin such that the brake pedal cannot be depressed.

In still a further embodiment, the present invention is directed to a device for locking the brake of a vehicle and preventing its theft comprising: a base member for a placement on the floorboard of a vehicle beneath a brake pedal; a steel U-shaped housing extending downward and having a first arm attached to the base and having a second shorter arm defining an opening for receiving of a brake pedal shaft, said space between the first and second arms defining a slot for receiving the brake pedal shaft and permitting its full extension upward through said slot, said first arm having a cylindrical opening extending therethrough and collinearly with said slot; a serrated rod extending through said cylindrical opening and being slidable therewith, said rod having a pin at a first end for catching the underside of said brake pedal shaft and a handle at a second end for pulling it upward in a decompressed position; and locking means adapted to lock the serrated rod for locking the position of the rod and pin such that the brake pedal cannot be depressed.

BRIEF DESCRIPTION OF THE FIGURES

FIG. 1 is an elevational view of the brake anti-theft device of the present invention.

FIG. 2 is an elevational view of the handle and lock pin utilized with the brake lock mechanism of the brake anti-theft device of the present invention.

FIG. 3 is an elevational view of the brake locking anti-theft device of the present invention in an inactive position.

FIG. 4 is an elevational view of the brake locking anti-theft device of the present invention in an activated state.

FIG. 5 is a side perspective view of an alternative embodiment of the brake locking anti-theft device of the present invention.

FIG. 6 is a perspective view of the alternative embodiment of the brake locking anti-theft device of present invention along line 6—6 of FIG. 5.

FIG. 7 is a perspective view of yet an additional base embodiment for use in the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

The brake anti-theft device of the present invention is now described with reference to the enclosed Figures wherein the

same numbers are utilized where applicable. In general, the present invention is a device specifically designed to lock the brake or clutch pedal of a motor vehicle in an up or non-depressed state.

Because since 1990, vehicles manufactured for sale in North American cannot start without the depression of the brake pedal or clutch pedal, the invention is specifically designed to prevent the pedal from being depressed thus, thereby disabling the vehicle and preventing its theft and use. This feature is referred to as the brake pedal shift interlock or BPSI in automatic transmission vehicles. Non-automatic transmission or so-call "standard have a similar feature called the clutch pedal start interlock or CPSI which requires the suppression of the clutch pedal to start the vehicle. The present invention is applicable to both types of vehicles.

A particular feature of the present invention is that it is intended to be utilized by the driver or operator from the comfort of the driver's seat of the vehicle without any need for the driver to get down on his hands or knees or crouch in order to place or adjust the system. While the present invention will be described in the context of a conventional automobile, it is to be appreciated that the teachings of the present invention are equally applicable to all manner of vehicles having brake shafts including sports utility vehicles, vans, pick-up trucks and trucks.

For purposes of explanation the present invention is now described in the context of a device which locks a brake pedal in an upward position, thus disabling the BPSI of the vehicle. Referring now to FIGS. 1 to 4, the brake lock anti-theft device of the present invention 10 comprises a base 12 which is placed on the floor of the vehicle adjacent to the brake pedal and shaft 13. The base 12 thereby is affixed flush to the floorboard of the vehicle directly below the brake pedal and pedal shaft 13.

Extending from the base 12 is a U-shaped steel housing 14 which extends downward. The U-shaped housing comprises two arms 16, 18. One arm 16 of the U-shaped housing is shorter than the other 18 thereby defining an opening 20 which extends to a slot 22 defined by the space between the arms legs of the U-shaped housing. The opening 20 facilitates the placement and removal of the brake pedal shaft 13. In a preferred embodiment, slot 22 should have an approximate width of the steel brake pedal shaft 13 such that the brake pedal shaft 13 extends through the slot and up to an extended position. In this position, the pedal can be depressed freely as it extends downward through said slot 22.

The invention further comprises a locking mechanism 32 associated with a second leg 18 of the U-shaped housing. The second leg 18 of the U-shaped housing 14 includes a cylindrical tube 24 designed to encase a slidable locking pin 26 which is attached to the end of an extendible rod 28. The rod 28 contains machined lock ratchets or serrations 30 which extend out the tube of the rectangular steel housing to a locking mechanism 32. The second end of the rod 28 comprises a handle 34 which is used to pull the rod upward.

The preferred locking mechanism or means 32 which is utilized in the present invention may be a commercially available key operated steering wheel locking mechanisms. There are other locking mechanisms suggested by the present invention including combination locks. Locking mechanism or means 32 locks the machine locked ratchets 30 at the appropriate point. As shown most clearly in FIG. 4, as the rod 28 extends upward, the pin 26 enters the slot 22, pulls up (Arrow A) and secures the bottom of the brake pedal